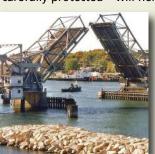




Lake Michigan and Lake Superior have had a profound effect on our environment, our culture, and our quality of life. More than 20% of Wisconsin's land area lies within the Great Lakes basin. Half of our population lives there. We enjoy more than 1,000 miles of Great Lakes shoreline. More than 1.6 million Wisconsin citizens get their drinking water from Lake Michigan or Lake Superior. We boat, fish, surf, and kayak on our Great Lakes. We hike, camp, ski and dogsled their shores. We play on their beaches and photograph their stunning sunrises and sunsets.

Lake Michigan and Lake Superior have fueled our economic growth in the past and – if properly restored and carefully protected – will help us revitalize our economy in



the future. Our Great Lakes are the foundation of a valuable tourism industry in lakeshore communities. Their water is vital for manufacturing. Their harbors and marinas support a \$9.4 billion dollar a year recreational boating industry.



More than 250,000 anglers enjoy Great Lakes sport-fishing opportunities. And the Great Lakes form a transportation network that links the heartland to global markets. More than \$7 billion worth of cargo passes through Wisconsin ports each year!

As the world's largest freshwater ecosystem, the Great Lakes are ecologically priceless. They support diverse aquatic and near-shore habitats. Sandy beaches, rocky shorelines, wetlands, and the world's largest freshwater dune system can all be found here. Each of these habitats – and its collection of plants and animals – is unique. Some are found nowhere else on earth.

Our Great Lakes are vast. They are also vulnerable. Polluted runoff and sediment from farm fields and cities, habitat loss, invasive species, toxic sediments, and climate change continue to threaten our Great Lakes. In this year's calendar we highlight some exciting restoration projects on Lake Michigan and Lake Superior. We include information about some of the lakes' most pressing issues, and we suggest ways that we can all help make sure our Great Lakes continue to be a valuable resource for generations to come.

Photographers from Wisconsin and beyond submitted over 200 beautiful photos for this year's contest. Wisconsin authors contributed a lovely collection of poems and song lyrics to our Great Lakes Writing Project. The photos and writings clearly show that the Great Lakes are among

Wisconsin's most scenic and beloved natural resources.

Thank you to all the 2011 photographers and authors for sharing your talent with us!



Visit the Office of the Great Lakes website to see more photos and writing submissions http://dnr.wi.gov/org/water/greatlakes/contest/



"As the largest freshwater ecosystem on Earth, the Great Lakes are among our most significant natural resources. Lake Michigan and Lake Superior contribute to Wisconsin's industry, tourism, recreation, and overall quality of life. They have shaped our past and will continue to shape our future."

GOVERNOR SCOTT WALKER



Photo by JERRY ZAJICEK

Great Lakes Restoration Initiative

Restoration and protection projects are underway throughout the Lake Michigan and Lake Superior watersheds thanks to federal Great Lakes Restoration Initiative (GLRI) funds. Fifty-one Wisconsin projects were selected to receive nearly \$30 million in GLRI funds through the U.S. EPA. Another 14 projects received \$1.2 million in GLRI funds from other federal agencies. These projects address Wisconsin's Areas of Concern where contaminated sediments remain buried in harbors; invasive species control; run-off pollution and near-shore health; habitat restoration; and monitoring, evaluation and communication.

We've highlighted some of Wisconsin's GLRI projects on the sidebars of this year's calendar. Find out more about GLRI projects statewide at dnr.wi.gov/org/water/greatlakes/glri/



"It's exciting to see our GLRI projects getting underway on Lake Michigan and Lake Superior. There is much to be done on these globally significant resources. The protection and restoration of these vast and priceless lakes will benefit Wisconsin's

citizens now and for generations to come."

- CATHY STEPP, DNR Secretary



"Wisconsin's Great Lakes" PHOTO CONTEST

Send us your best photos of Lake Michigan or Lake Superior. We're looking for beautiful shorelines, kids and adults enjoying the lakes, cultural and historic aspects of the lakes, and people involved in lake protection or restoration efforts. Winning photos will be used in the 2012–2013 Wisconsin's Great Lakes calendar and in other Wisconsin DNR publications, presentations, websites and displays. Photo submission deadline is February 1, 2012. *Photos in all seasons are needed!*

Entry Categories (limit three photo entries per individual):

- 1. **People enjoying Wisconsin's Great Lakes.** Images of people fishing, kayaking, sailing, playing on the beach, etc.
- 2. Natural features and wildlife. Great Lakes shoreline, wetlands and tributaries, fish and other wildlife.
- 3. **Historic and cultural features.** Lighthouses, harbor towns, festivals, shipping, etc.
- 4. **Lake protection activities.** Images of restoration work, storm drain stenciling, beach clean-ups, sturgeon guards, research, etc.

Rules:

- 1. The contest is open to anyone. Photos must be submitted electronically.
- 2. Attach each photo (jpeg format) to a separate e-mail.
- 3. In each e-mail, please include the photo title, where in Wisconsin the photo was taken, the entry category, your name, e-mail address, mailing address, and phone number(s).
 Submit to: DNRGreatLakesphotocontest@wisconsin.gov.
- 4. Photos must be high resolution, horizontal in orientation, and taken in Wisconsin.
- 5. The Wisconsin DNR reserves the right to use images entered in the contest for non-commercial educational or promotional use with credit to the photographer. For example, photos may be used for DNR displays, slide shows, videos, publications and website.

Judging:

Photos will be judged by a panel of Wisconsin DNR staff. Criteria for judging will include creativity, visual and technical merit, and composition.

Awards and Prizes:

Winning photographs will be included in the 2012–2013 *Wisconsin's Great Lakes* calendar. Winning photographers will be contacted by mail, phone or e-mail and will receive the calendar by mail.

E-mail photos and entry information to: DNRGreatLakesPhotoContest@wisconsin.gov

"Wisconsin's Great Lakes" WRITING PROJECT

Is your talent writing? Send us your original Great Lakes quote, essay, poem, song or rap. Help get the word out about how great Wisconsin's Great Lakes are. Share your favorite writings with us and you may find your words on our website, calendar, publications and displays! (All authors will be credited.)

E-mail writings to: DNRGreatLakesWriting@wisconsin.gov



ABOVE: "Break of Dawn" by JOHN M. GLOWACKI 2nd Place – Natural Features and Wildlife Racine, WI

Lake Michigan Invasive Plant Removal

A fast growing, aggressive strain of non-native *Phragmites australis* is wreaking havoc on our native wetlands. But the DNR and its many partners are fighting back.

Federal funds awarded through the Great Lakes Restoration Initiative (GLRI) will support work to remove non-native Phragmites on 3,600 acres and 118 miles of the Lake Michigan shore. The DNR, along with Brown, Oconto, Marinette, Sheboygan, Door and Manitowoc counties, began work in the summer of 2011 to remove Phragmites and restore Lake Michigan's valuable wetlands.

Large stands (monocultures) of nonnative Phragmites are sprayed by helicopter and smaller infestations are sprayed by hand. As soon as the Phragmites is gone and light can reach the soil, native seeds begin to grow. After two or three years, a more natural, native, and valuable wetland will result. Continued management will keep non-native Phragmites out.

For more information about this and other Wisconsin GLRI projects, visit: dnr.wi.gov/org/water/greatlakes/qlri/index.htm



Photo by AMANDA OLIVE

September 2011

ı	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	AUGUST 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	OCTOBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			1	2	3
	4	5 Labor Day	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23 Autumn Begins	24
	25	26	27	Rosh Hashanah begins at sundown	29	30	Trido by Wather Rombert



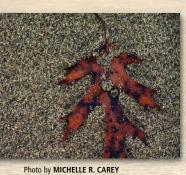
ABOVE: "To Protect and Serve" by KAREN GERSONDE 1st Place – Lake Protection Activities Milwaukee, WI

Migration

— by MARYANN HURTT

a million prisms light the lake
on this cheerleader blue sky of a day
I pad my way carefully
to the water's edge
geese chatter
on the best way south
I get too close
all discussion is off
their wet blanket flapping of wings
propels them
their honking loud at first
fades
and they are out of sight

I will wait out winter for a cold March day sit in marshy muck listen for racket and celebrate reunion all over again



October 2011

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		SEPTEMBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	NOVEMBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			1
2	3	4	5	6	Yom Kippur begins at sundown	8
9	10 Columbus Day	11	12	13	14	15
16	17	18 Clean Water Act signed in 1972	19	20	21	22
23	24	25	26	27	28	29
30	31 Halloween		•			



November 2011

Emerging Trouble

Wisconsin's waterways are threatened by emerging pollutants in ways we are only beginning to understand. There are thousands of new chemicals in the environment. from plastics, rubber and fuels, to home and personal care products. Often these chemicals are hard to detect, cannot be fully removed by water treatment facilities, and may have combined effects. Emerging pollutants can end up in our lakes, streams and drinking water. Many are endocrine disruptors (chemicals that mimic hormones) and can have drastic effects on fish and frogs. It is unclear what affects these new chemicals may have on human health.

Keep these chemicals out of our water:

- Use medicines as directed and dispose of any remaining pharmaceuticals at local Med Drops.
- Consider healthier alternatives to home, yard and personal care products.
- Use up personal and home care products when possible.
- Properly dispose of all leftover chemicals. Never flush them down the toilet or pour them down the sink! Check for Clean Sweep events in your area.
- Recycle or properly dispose of old computers and other electronic equipment.

For more information, visit dnr.wi.gov/org/aw/wm/pharm/pharm.htm

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	OCTOBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	DECEMBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3	4	5
A STATE OF THE PARTY OF THE PAR	6 Daylight Savings Time Ends	7	8	9	10 Veterans Day	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24 Thanksgiving Day	25	26
	27	28	29	Photo by JAMES E. SCHUITZ			



December 2011

Global Warming or Climate Change?

Global warming refers to the overall increase in average temperature of the earth. Climate change refers to smaller scale changes that are a consequence of a warming world and that affect us personally. These could be increases in humidity or evaporation, or a change in rain, snow or ice cover on our lakes.

Predicting these changes is complicated and scientists have developed many different mathematical models to do just that. Although the details differ, these models indicate that: 1) our climate is changing and 2) human activities are primarily responsible.

Monster storms, drought, and reduced ice cover on our lakes are all consistent with these models. As we have seen recently, these climate events can be environmentally, economically and socially devastating.

To learn about climate change in Wisconsin, visit

climatewisconsin.org

The Wisconsin Climate Change Initiative (WICCI) is a diverse group of scientists, natural resource managers, business experts, local government officials, health professionals and others who are working to determine how a changing climate will affect our state and how we can adapt to these changes.

Learn more at www.wicci.wisc.edu

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	NOVEMBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JANUARY 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			1	2	3
	4	5	6	7	Great Lakes Compact enacted	9	10
	11	Great Lakes Restoration Strategy released in 2005	Great Lakes Compact signed by governors in 2005	14	15	16	17
f	18	19	20 Hanukkah begins at sundown	21	22 Winter Begins	23	24
	25	26	27	28	29	30	31
	Christmas Day	Kwanzaa Begins					New Year's Eve



January 2012

New Year's Resolution: Fix a Leak

The average household wastes more than 10,000 gallons of water every year through easy-to-fix leaks. That's enough water to wash nearly 10 months worth of laundry! Fixing easily corrected household water leaks can save homeowners more than 10% on their water bills.

Stop the leak:

- Check for dripping faucets, showerheads and fixture connections.
- Check toilets for silent leaks. Put a few drops of food coloring into the tank, wait 15 minutes, and see if color appears in the bowl before you flush.
- Check irrigation systems and outdoor spigots.
- Use your water meter to check your whole house. Read your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.

For more ways to save water, visit dnr.wi.gov/org/water/dwg/greatl akes/conservation epa.gov/watersense/water_efficiency/what_you_can_do.html

A "water footprint" is an indicator of water use. Calculate your water footprint at www.waterfootprint.org.

Remember to submit your best Great Lakes photos! See information on the first pages of this calendar. The deadline is February 1, 2012

n:	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
e t's	1	2	3	4	5	6	7
78	New Year's Day						
t a see ore	8	9	10	11	12	13	14
is s	15	Soo Locks close to ships Martin Luther King Day	17	18	19	20	21
ici of	22	23 Chinese New Year	24	25	26	27	28
on	29	30	31			DECEMBER 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	FEBRUARY 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29



February 2012

Lake Superior

— by LIZ SMITH

The great inland sea,
The Queen Mother of all lakes,
The she-wolf of the north woods and
the Canadian Shield
Lies in her bed on the border of two
nations,

Of a blue that nothing else equals As she sparkles in the summer sun.

Her moods are many, and changeable in an hour.

She holds in her lap the lives of those who invade her clear waters.

She wreaks havoc on her rocky shores and curving beaches;

She lays still and glassy on warm summer nights

While underneath, her great swells of power and might remain.

She creates her own micro-climate.

This great inland sea whispers to me with her soft soothing waves on the beach,

And roars to me with her twenty foot smashing breakers;

She screams as the frigid winds send walls of snow across her surface, She shuts me out with her fog,

And refreshes my tired mind and troubled soul with her eternal presence.

She is timeless and will remain long after I am gone.

How fortunate I am to have been given a glimpse into her intimacies.

This poem was shortened for inclusion in the calendar. To see the complete work, visit dnr.wi.gov/org/water/ greatlakes/contest/

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	JANUARY 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MARCH 2012 S M T W T F S	1	2 Groundhog Day	3	4
5	6	7	8	9	10	11
12	13	14 Valentine's Day	15	16	17	18
19	20 President's Day	21	22	23	24	25
26	27	28	Photo by SCOTT AND ERSON			



ABOVE: "Spring Storm" by ERIC POGGEMANN 1st Place - Natural Features and Wildlife Port Washington, WI

Northern Pike Habitat Restoration Project

County staff, DNR biologists, anglers, and other citizens are trying to make life a little easier for Lake Michigan's northern pike. They are working together to improve spawning and rearing habitat in Brown and Oconto counties.

Northern pike rely on healthy wetlands and intermittent streams for spawning. The west shore of Green Bay has lost 70% of its wetlands and its streams have been degraded by erosion and nutrient pollution. Federal funding through the Great Lakes Restoration Initiative (GLRI) will support the restoration of 58 acres of wetlands and the addition of buffer strips along 16 miles of streams to protect them from polluted runoff.

This project will improve a valuable Wisconsin fishery, increasing sportfishing opportunities and boosting the local economy.

For more information about this and other Wisconsin GLRI projects, visit dnr.wi.gov/org/water/greatlakes/ glri/index.htm

March 2012

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
ds			FEBRUARY 2012 S M T W T F S 1 2 3 4 1 2 3 4 1 12 13 14 15 16 17 18 19 20 21 22 23 24 25 19 26 27 28 29	APRIL 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3
d al	4	5	6	7	8	9	10
ne	Daylight Savings Time Begins	March 12–18 National Fix A Leak Week Visit www.epa.gov/ watersense	13	14	15	16	17 St. Patrick's Day
	18	19	20 Spring Begins	21	22	23	24
The state of the s	25 Soo Locks open to ships	26	27	28	29	30	31





April 2012

Reduce Your Carbon Footprint

The average person produces over 100 lbs of carbon dioxide (CO2) each day, contributing to climate change. Take these simple steps to decrease your "carbon footprint." Ride your bike, walk, car pool or use public transportation when possible. Keep your car tuned up and tires properly inflated. Use compact fluorescent bulbs in your home and turn lights and electronics off when you're not using them. During the day, set your computer to sleep; at night, shut it down. Have an energy audit done for your house to make it more comfortable and more efficient.

To calculate your carbon footprint, visit dnr.wi.gov/climatechange/ role.htm

Find out more about climate change at dnr.wi.gov/climatechange/. Learn about planting trees for polar bears (and for Wisconsin's Great Lakes). Check out "The Link Between Green Trees and Blue Ice" on this web page.

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	1	2	3	4	5	6	7
	April Fool's Day					Good Friday Passover begins at sundown	
	8 Easter Sunday	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22 Earth Day	23	24	25	26	27 Arbor Day	28
	29	30			MARCH 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10	MAY 2012 S M T W T F S	



Photo by MARC PONTO



11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31





May 2012

Prevent Nonpoint Source Pollution

Nonpoint source pollution (runoff) from farms and cities threatens Wisconsin's waters. We can help. Leave grass clippings in place after mowing and test your soil before fertilizing lawns. Seed bare ground and cover with mulch to decrease erosion. Plant a rain garden and direct your downspouts toward it. Use rain barrels to collect water for lawns and gardens. Instead of fertilizing, add mulch or compost to perennial gardens each year. Maintain your septic system if you have one. Clean up pet waste.

Compost leaves and plant-based food scraps. If you do put leaves on the curb, try to do so just before collection and keep them out of street-side gutters and ditches.

For more information, visit

dnr.wi.gov/org/aw/wm/recycle/ne wpages/yardwaste.htmv2.mmsd. com/HowToHelp.aspx

For information on beneficial www.epa.gov/greenkit/

landscaping, visit landscap.htm

-1							
	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	APRIL 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JUNE 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3	4	Cinco de Mayo
The second second second	6	7	8	9	10	11	12
	13 Mother's Day	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28 Memorial Day	29	30	Photo by Doug STAMM		

Photo by JUDY HALVERSON



June 2012

Ashland Shoreline Restoration

Industrialization of Ashland's waterfront in the early 1900's significantly altered the natural environment of the shoreline. Lumber mills, wharves for handling coal, ore, limestone, logs, and pulpwood negatively impacted the ecology of this once pristine environment. Much of the industrial activity has ended, but significant amounts of debris still pollute Ashland's waterfront.

Great Lakes Restoration Initiative (GLRI) funds will support the restoration of 4,100 feet of public shore land in the City of Ashland. The DNR is working in partnership with Michigan Technical University, the City of Ashland, Ashland County, UW-Extension, Northland College and a team of citizen volunteers to restore this economically and environmentally valuable area. Scientists will study the effects of the restoration on native wildlife as well as the impact on runoff pollution to Lake Superior.

Restoring Lake Superior's postindustrial lands to more natural shorelines will enhance scenic beauty, protect the region's ecology, and provide opportunities for recreation and tourism.

For more information about the GLRI, visit dnr.wi.gov/org/water/ greatlakes/glri/index.htm

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
MAY 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	JULY 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31				1	2
3	June 4–8 National Rip Current Awareness Week Visit www.ripcurrents. noaa.gov/	5	6	7	8	9
10	11	12 Flag Day	13	14	15	16
17 Father's Day	18	19	20	21 Summer Begins	22	23
24	25	26	27	28	29	30



ABOVE: "Riding the Waves" by CAROLEE EURITT SALAT 1st Place – People Enjoying Wisconsin's Great Lakes

July 2012

Rx: Great Lakes!

From the calming effects of a walk in the woods to the intense cardiovascular workout of a run on the beach, health care professionals are recognizing the benefits of nature outings on mental and physical health. Many are even starting to prescribe outdoor activity to help treat conditions from heart disease to attention deficit disorder.

At Wisconsin's State Parks, you can enjoy a wealth of recreation opportunities. Hike, run, bike, ski, snowshoe, kayak, canoe, surf, wade, swim and walk the dunes along the shores of the Great Lakes. To find a State Park on Lake Michigan or Lake Superior, visit

dnr.wi.gov/org/land/parks

"Get Outdoors! Wisconsin" addresses a growing problem that author Richard Louv terms "nature deficit disorder." For ideas about getting your family outside, visit dnr.wi.gov/org/land/parks/ interp/getoutdoors

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6	7
				Independence Day			
	8	9	10	11	12	13	14
	15	16	17	18	19	20 First of Ramadan	21
	22	23	24	25	26	27	28
STATES OF STATES AND ADDRESS OF THE PARTY OF	29	30	31			JUNE 2012 S M T W T F S 1 2 3 4 5 6 7 8 9	AUGUST 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11





10 11 12 13 14 15 16 17 18 19 20 21 22 23 19 20 21 22 23 24 25 24 25 26 27 28 29 30 26 27 28 29 30 31

12 13 14 15 16 17 18

Wisconsin's GREAT LAKES!



August 2012

What's a Waterspout?

Waterspouts are an unusual weather phenomenon that can sometimes be seen over the Great Lakes. There are two types of waterspouts: tornadic and fair weather. Tornadic waterspouts start as true tornadoes associated with thunder storms that move out across the water. Tornadic waterspouts can be very large and destructive. Fair weather waterspouts form when cool air masses move across warm lake water and usually occur from August through October. Fair weather waterspouts are usually small, relatively brief and less destructive than tornadic waterspouts. However, both should be taken seriously.

When warnings are issued for waterspouts, quickly seek safe harbor or find shelter out of the path of the waterspout. It is unsafe to be on the water when waterspouts occur...but its fun to watch them on You Tube! www.youtube.com (search: water spouts).

NOAA's All Hazards Weather Radio broadcasts current weather information 24 hours a day. For more information, visit www.crh.noaa.gov/apx/nwr.php

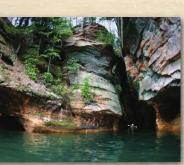


Photo by TIM FEATHERS

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		JULY 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	SEPTEMBER 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	Wisconsin State Fair Begins PICK UP YOUR 2013 GREAT LAKES CALENDAR! August 2–12	3	4
	5	6	7	8	9	10	11
	12 Wisconsin State Fair Ends	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	THE RESIDENCE OF THE PARTY AND



ABOVE: "Kenosha Daybreak" by **JOHN M. GLOWACKI** 1st Place – Cultural and Historic Features Kenosha, WI

ABCs of Dawn

— by BONNIE DICKMANN

A day does not
Break on our Great Lake
Coming loud and rambunctious
Demanding attention.

Every dawn I know
Feels supple, breathes support
Glowing lava
Heating the day.

Indeed, sometimes I am
Jostled into wakefulness
Kindling a sense of urgency
Leading me to sense
Maybe days pass too quickly.

No need to worry
Our lake sunrise
Presents opportunity
Quiescence of hope
Revealed in Nature's gift.

Start each day
Traveling in bliss
Under this serene
View of perfection.

Window to a world Xanadu, perhaps Your own early chance for Zen



Photo by HOLLY GERTZ

September 2012

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURD	AY
			AUGUST 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	OCTOBER 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			1	
	2	3 Labor Day	4	5	6	7	8	•
	9	10	11	12	13	14	15	•
VIII.	16 Rosh Hashanah begins at sundown	17	18	19	20	21	22 Autumn Begins	•
	23	24	25	26	27	28	29	
*	30		Yom Kippur begins at sundown					\circ



October 2012

A Legacy of Trouble

The Great Lakes and their tributaries have been vital to the growth of Wisconsin industries. Unfortunately, many of the chemicals used in past manufacturing — legacy pollutants — remain in the sediments of the lakes and rivers. Legacy pollutants are chemicals that remain in the environment for a long time. These chemicals include mercury, lead, arsenic and polychlorinated biphenyls (PCBs).

PCBs are a group of about 200 manmade chemicals that were produced and used from 1929 to 1970 when they were banned. PCBs build up in the food chain and can affect the health of fish, wildlife and humans. In fish and wildlife PCBs can affect the immune, reproductive, nervous and endocrine systems. In humans they are also suspected carcinogens.

With the help of Great Lakes Restoration Initiative (GLRI) funds, on-going clean up of many of our state's toxic sediment sites can proceed more quickly.

Learn more about PCBs and other legacy pollutants, at dnr.wi.gov/org/water/greatlakes /priorities/aocs.html

For more information on the GLRI, visit dnr.wi.gov/org/water/greatlakes/glri/index.htm

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	Photo by PRISCILLA FARRELL	2	3	4	5	6
7	8 Columbus Day	9	10	11	12	13
14	15	16	17	18 Clean Water Act signed in 1972	19	20
21	22	23	24	25	26	27
28	29	30	Halloween		SEPTEMBER 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	NOVEMBER 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



November 2012

A River Runs Backward

In 1907, the Chicago Sanitary and Ship Canal was completed, connecting Lake Michigan to the Des Plaines River and beyond. The canal came about for a couple reasons. In the late 1870s – early 1880s the people of Chicago became concerned about the flow of sewage into Lake Michigan, Chicago's drinking water source. There was also a desire to connect more tightly to world trade. The canal provided a means to dispose of treated wastewater and provided Chicago industry and commerce a direct link to the oceans through the Mississippi River and the Gulf of Mexico. Unfortunately, it also provided a link between the Mississippi River and Lake Michigan that allows the passage of invasive species like Asian carp.

Does the Chicago River "flow backward?" It's a little complicated, but basically the flow of the river was reversed. The divide between the Lake Michigan and Mississippi River basins is only 12 miles from Chicago.

Excavating through the ridge that separates the two basins was the key to the diversion. Today, diversions like this from the Great Lakes are very closely regulated by the Great Lakes Compact — an agreement between all Great Lakes states and provinces.

For more information about the Great Lakes Compact, visit dnr.wi.gov/org/water/ greatlakes/annex2001

To learn more about Asian carp, visit dnr.wi.gov/news/mediakits/mk_carpcontrol.asp

For more information and historic photos of the canal, visit www.encyclopedia.chicagohistory .org/pages/300018.html

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		OCTOBER 2012 S M T W T F S 1 2 3 4 5 6 1 2 3 4 5 6 1 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	DECEMBER 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3
Daylight Savings Time Ends	5	6 Election Day	7	8	9	10
1 1 Veterans Day	12	13	14	15	16	17
18	19	20	21	22 Thanksgiving Day	23	24
25	26	27	28	29	Hoto by JOE WALLINER	



December 2012

Lake Michigan, Lake Michigan

— by KAREN GERSONDE

Lake Michigan, Lake Michigan, I hear your waters calling.

Calling me back to days of old, calling me back to your waters so cold.

My childhood memories play on your shores, skipping stones by scores and scores.

Walking along beaches covered with stones, swimming in water that chilled to the bone.

My father, mother and brother, too, would drive down to the harbor to see what was new.

Huge freighters, ore carriers, fishermen and boats, we would see everything and anything that would float.

Your winter world was second to none, with spectacular ice flows glistening in the sun.

The docks and breakwaters were covered in white; your glorious splendor was quite a sight.

Oh Michigan, Lake Michigan, I yearn for the days of old, although my memories are in the past, your waters hold more memories to be told.



Photo by CAROL SEAGO

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
ar ng			NOVEMBER 2012 S M T W T F S 1 2 3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JANUARY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			1
to	2	3	4	5	6	7	Hanukkah begins at sundown Great Lakes Compact enacted in 2008
t.	9	10	11	Great Lakes Restoration Strategy released in 2005	Great Lakes Compact signed by governors in 2005	14	15
e	16	17	18	19	20	21 Winter Begins	22
	23	24	25	26	27	28	29
	30	31 New Year's Eve	Christmas Day	Kwanzaa Begins			

For more information, visit: http://dnr.wi.gov/org/water/greatlakes



ABOVE: "Summer Spirits" by KRAIG KRUEGER

"The ultimate test of a man's conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard."

GAYLORD NELSON

former governor of Wisconsin and co-founder of Earth Day



Wisconsin Department of Natural Resources

Office of the Great Lakes, 101 S. Webster, Madison, WI 53707-7921 http://dnr.wi.gov/org/water/greatlakes

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